We claim:

1. A process for the preparation of the compound of formula II:

or a salt thereof which is substantially free of the Δ^2 isomer, which comprises treating the compound of formula III:

wherein n = 0 or 1,

in cyclohexane with a C_1 - C_4 -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 2. The process according to claim I, wherein the salt is hydrochloride or hydroiodide salt.
- 3. The process according to claim I, wherein the compound of the formula III used is the compound IIIa;

$$(CH_3)_3SiHN \xrightarrow{S} H_3C \\ CH_2 \\ N^{+} \\ CO_2Si(CH_3)_3$$

- 4. The process according to claims 1 and 3, wherein the C_1 C_4 alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.
- 5. The process according to claim 4, wherein the C₁ C₄ alkanol is isopropyl alcohol.
- 6. A process for the preparation of the compound of formula II:

or a salt thereof which is substantially free of the Δ^2 isomer, comprising the steps of:

a) reacting the compound of formula IV:

$$(CH_3)_3Si(OCO)_nHN$$
 CH_2I
 $CO_2Si(CH_3)_3$

wherein n = 0 or 1,

in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

$$(CH_3)_3Si(OCO)_nHN$$
 O
 CH_2
 $CO_2Si(CH_3)_3$

wherein n = 0 or 1,

and

- (b) treating the compound of formula III in cyclohexane with a C_1 C_4 -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- The process according to claim 6, wherein the conversion into the salt in step (b) is carried out by treating the compound of formula II with hydrochloric acid or hydroiodic acid.
- 8. The process according to claims 6 and 7, wherein the compound of formula IV used is the compound IVa:

$$(CH_3)_3SiHN \xrightarrow{S} CH_2I \xrightarrow{CO_2Si(CH_3)_3}$$

to obtain the compound formula IIIa:

$$(CH_3)_3SiHN$$
 CH_2
 CH_2
 $CO_2Si(CH_3)_3$

9. A process for the preparation of the compound of formula II:

or a salt thereof which is substantially free of the Δ^2 isomer, comprising the steps of:

a) reacting the compound of formula V:

$$(CH_3)_3Si(OCO)_nHN$$
 CH_2OCOCH_3 $CO_2Si(CH_3)_3$

wherein n = 0 or 1,

in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V to produce the compound of formula IV:

wherein n = 0 or 1,

$$(CH_3)_3Si(OCO)_nHN$$
 CH_2I
 $CO_2Si(CH_3)_3$

 reacting the compound of formula IV in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

wherein n = 0 or 1,

and

- (c) treating the compound of formula III in cyclohexane with a C₁ C₄ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 10. The process according to claim 9, wherein the salt is hydrochloride or hydroiodide salt.
- 11. The process according to claim 9, wherein the compound of the formula V used is the compound Va;

$$(CH_3)_3SiHN$$
 CH_2OCOCH_3
 $CO_2Si(CH_3)_3$

12. A process for the preparation of the compound of formula I(i) or I(ii):

$$H_2N$$
 CH_2
 CH_2
 CH_2
 CH_2
 CH_2
 CH_3
 CH_3

or a salt thereof which is substantially free of the Δ^2 isomer, comprising the steps of:

a) treating the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound of formula VI and catalytic amount of trimethylsilyl iodide to produce the compound of formula V:

$$(CH_3)_3Si(OCO)_nHN \xrightarrow{S} CH_2OCOCH_3 \\ CO_2Si(CH_3)_3$$

wherein n = 0 or 1,

b) treating the compound of formula V in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V to produce the compound of formula IV:

$$(CH_3)_3Si(OCO)_nHN$$
 CH_2I
 $CO_2Si(CH_3)_3$

wherein n = 0 or 1,

c) reacting the compound of formula IV in cyclohexane with Z or HZ to produce the compound of formula III(i) or with Z to produce the compound of formula III(ii):

$$(CH_3)_3Si(OCO)_nHN \xrightarrow{S} (CH_2-z) \\ CO_2Si(CH_3)_3 \\ III(i) \\ (CH_3)_3Si(OCO)_nHN \xrightarrow{S} CH_2-z \\ CO_2Si(CH_3)_3 \\ III(ii)$$

wherein n = 0 or 1.

$$-S \overset{\mathsf{N-N}}{\underset{\mathsf{CH}_3}{\bigvee}}, \ -S \overset{\mathsf{N-N}}{\underset{\mathsf{CH}_3}{\bigvee}} \mathsf{CH}_3 \ , \ -S \overset{\mathsf{N-N}}{\underset{\mathsf{CH}_2}{\bigvee}} \mathsf{CD}_2 \mathsf{H} \qquad \mathsf{Or} \quad -S \overset{\mathsf{N-N}}{\underset{\mathsf{CH}_2}{\bigvee}} \mathsf{Or} \quad -S \overset{\mathsf{N-N}}{\underset{\mathsf{CH}_2}{\bigvee}} \mathsf{CD}_2 \mathsf{H} \qquad \mathsf{CH}_2 \mathsf{SO}_3 \mathsf{H}$$

and

$$Z^+$$
 is $-N^+$, $-N^+$, or $-N^+$

- (d) treating the compound of formula III(i) or III(ii) in cyclohexane with a C_1 C_4 alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 13. The process according to claim 12, wherein the compound produced in step (c) is III(ii) wherein Z^+ is

and n = 0.

- 14. The process according to claim 12, wherein the salt is hydrochloride or hydroiodide salt.
- 15. A process for the preparation of the compound of formula II:

$$H_2N$$
 O
 CH_2
 N
 CH_2
 O
 O

or a salt thereof which is substantially free of the Δ^2 isomer, which comprises treating a solution of the compound of formula V:

$$(CH_3)_3Si(OCO)_nHN \xrightarrow{\qquad \qquad CH_2OCOCH_3} CO_2Si(CH_3)_3$$

wherein n = 0 or 1,

in cyclohexane with at least one equivalent of N-methylpyrrolidine then with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V,

followed by treatment with a C_1 - C_4 - alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- The process according to claim 15, wherein the salt is hydrochloride or hydroiodide salt.
- 17. The process according to claim 15, wherein the compound of the formula V used is the compound Va;

$$(CH_3)_3SiHN \xrightarrow{S} CH_2OCOCH_3$$

$$CO_2Si(CH_3)_3$$

18. A process for the preparation of the compound of formula II:

$$H_2N$$
 N
 CH_2
 N
 CH_2
 N

or a salt thereof which is substantially free of the Δ^2 isomer, which comprises treating a solution of the compound of formula V:

$$(CH_3)_3Si(OCO)_nHN$$
 CH_2OCOCH_3 $CO_2Si(CH_3)_3$

wherein n = 0 or 1,

in cyclohexane with the compound of formula VII:

in cyclohexane, followed by treatment with a C_1 - C_4 -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 19. The process according to claim 18, wherein the salt is hydrochloride or hydroiodide salt.
- 20. The process according to claim 18, wherein the compound of the formula V used is the compound Va;

21. A process for the preparation of the compound of formula II:

or a salt thereof which is substantially free of the Δ^2 isomer, which comprises treating a solution of the compound of formula VI:

$$H_2N$$
 CH_2OCOCH_3 CH_2OCOCH_3

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound VI and then with the compound of formula VII:

in cyclohexane, followed by treatment with a C_1 - C_4 -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 22. The process according to claim 21, wherein the salt is hydrochloride or hydroiodide salt.
- 23. The process according to claim 21, wherein the reaction with the compound VII is carried out in the presence of trimethylsilyl iodide.
- 24. The process according to claim 21, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amounts of imidazole and acetamide.
- 25. The process according to claim 21, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amount of trimethylsilyliodide.